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EXAMINER	
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ART UNIT	**PAPER NUMBER**
3628	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/532,080	BOUTIN ET AL.	
	Examiner	Art Unit	
	George Chen	3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/18/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. DETAILED ACTION

2. This communication is a final-action in response to amendment filed on 02/18/2009. Claims 9-25 are pending with claims 9, 12, 13, 15, 16 amended, claims 17-25 are new and claims 1-8 cancelled.

3. Information Disclosure Statement

4. The information disclosure statement (IDS) submitted on 02/18/2009 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

5. Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. **Claims 9-14, 17-19 are rejected under 35 U.S.C. 101 as being non-statutory subject matter.**

8. A claimed process is eligible for patent protection under 35 U.S.C. § 101 if:

> "(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing. See Benson, 409 U.S. at 70 ('Transformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines.'); Diehr, 450 U.S. at 192 (holding that use of mathematical formula in process 'transforming or reducing an article to a different state or thing' constitutes patent-eligible subject matter); see also Flook, 437 U.S. at 589 n.9 ('An argument can be made [that the Supreme] Court has only recognized a process as within the statutory definition when it either was tied to a particular apparatus or operated to change materials to a 'different state or thing' '); Cochrane v. Deener, 94 U.S. 780, 788 (1876) ('A process is...an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing.').[7] A claimed

> process involving a fundamental principle that uses a particular machine or apparatus would not pre-empt uses of the principle that do not also use the specified machine or apparatus in the manner claimed. And a claimed process that transforms a particular article to a specified different state or thing by applying a fundamental principle would not pre-empt the use of the principle to transform any other article, to transform the same article but in a manner not covered by the claim, or to do anything other than transform the specified article." (*In re Bilski, 88 USPQ2d 1385, 1391 (Fed. Cir. 2008))*

Also noted in *Bilski* is the statement, "Process claim that recites fundamental principle, and that otherwise fails 'machine-or-transformation' test for whether such claim is drawn to patentable subject matter under 35 U.S.C. §101, is not rendered patent eligible by mere field-of-use limitations; another corollary to machine-or-transformation test is that recitation of specific machine or particular transformation of specific article does not transform unpatentable principle into patentable process if recited machine or transformation constitutes mere 'insignificant post-solution activity.'" (*In re Bilski, 88 USPQ2d 1385, 1385 (Fed. Cir. 2008))* Examples of insignificant post-solution activity include data gathering and outputting. Furthermore, the machine or transformation must impose meaningful limits on the scope of the method claims in order to pass the machine-or-transformation test. Please refer to the USPTO's "Guidance for Examining Process Claims in view of *In re Bilski*" memorandum dated January 7, 2009, http://www.uspto.gov/web/offices/pac/dapp/opla/documents/bilski_guidance_memo.pdf .

It is also noted that the mere recitation of a machine in the preamble in a manner such that the machine fails to patentably limit the scope of the claim does not make the claim statutory under 35 U.S.C. § 101, as seen in the Board of Patent Appeals Informative Opinion *Ex parte*

Langemyr et al. (Appeal 2008-1495),

http://www.uspto.gov/web/offices/dcom/bpai/its/fd081495.pdf .

Claims 9-14, 17-19 are not tied to a particular machine or apparatus nor do they transform a particular article into a different state or thing, thereby failing the machine-or-transformation test; therefore, claims 9-14, 17-29 are non-statutory under § 101.

Appropriate correction is required.

9. Claim Rejections - 35 USC § 112

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 9, 15, 16 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant does not show support for the amended limitations; for examples, the guide and the mean of a single zone disclosed in claims 9, 15, 16 are not disclosed in the original specification.

12. Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. **Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shropshire (WO 02/059801 A2) in view of Alibozek (Alibozek, Tim, Smart software builds a better harness, Machine Design, vol 70, no 8, pages 89-92, 1998).**

15. As per claim 9, Shropshire discloses a method for synthesis of a routing, comprising:

- ✓ a) obtaining parameters of:
  - different configurations of service variants and calculator variants (Shropshire, page 6, design is split into modules that roughly map to the options available to the customer. there is a virtual parent harness which includes all possible modules) and a percentage occurrence of the configurations, a sum of proportions of the configurations being considered equal to one,
  - cost characteristics of components stored and weighted as a function of their respective installation proportions (Shropshire, page 7, amount of material needed is a function of the modules chosen and can usually be approximated),
  - partial or complete mapping of service variants onto calculator variants (Shropshire, page 6, design is split into modules that roughly map to the options available to the customer. there is a virtual parent harness which includes all possible modules),
- ✓ b) identifying valid routings (Shropshire, page 5, wiring harness design is analyzed and module data is created automatically);

- ✓ c) evaluating routing cost of the valid routings for each configuration (Shropshire, page 7, amount of material needed is a function of the modules chosen and can usually be approximated); and

Shropshire does not explicitly disclose a percentage occurrence of the configurations, a sum of proportions of the configurations being considered equal to one and d) determining the valid routing that minimizes the mean, weighted by the installation proportions of each configuration, of the routing costs for each configuration. Alibozek teaches identifying all possible occurrences (Alibozek, page 92, a smart algorithm explores all possible paths) and determining optimized routing (Alibozek, page 92, algorithms derived from user input data automatically optimize the wire harness for its environment by balancing cost). Alibozek also teaches e) displaying, in a first view on a display, a plurality of zones into which the service variants and the calculator variants are grouped, wherein the first view includes a guide to indicate how the plurality of zones are situated relative to one another (see at least Alibozek, page 91, the figure on the upper right corner shows a display for a plurality of zones into which the wires are grouped and shows how each zones are situated relative to one another); and f) displaying, in a second view on the display, the valid routing that minimizes the mean of a single zone of the plurality of zones (see at least Alibozek,, page 91-92, the figure on lower corner of page 92 states that embassy lets designer select subassemblies and magnify components to observe individual connections; and see page 92, figure on the upper left corner, which states that using the logical and physical information in the data model, optimization techniques control the correct design output)

Therefore, it would have been obvious for one with ordinary skill in the art at the time of the invention to combine method of synthesis routing with determining optimized routing and for the purpose to tailor automobiles to their own specification and accelerate design process (Shropshire: page 3; Alibozek: page 89).

16. As per claim 10, Shropshire discloses a method according to claim 9, but does not explicitly disclose wherein a quality characteristic expressed as breakdowns per million is considered to compare respective measures of two candidate architectures for a product plan. Alibozek teaches using quality characteristic to compare respective measures of two candidate architectures for a product plan (Alibozek, page 92, the choice of wire, connectors, and associated parts can have a significant impact of harness costs, quality, and weight. software can explore trade-offs using a routine and makes suggestions to improve harness).

Therefore, it would have been obvious for one with ordinary skill in the art at the time of the invention to combine method of synthesis routing with using quality characteristic to compare respective measures of two candidate architectures for a product plan for the purpose to tailor automobiles to their own specification and accelerate design process (Shropshire: page 3; Alibozek: page 89).

17. As per claim 11 Shropshire discloses a method according to claim 10, but does not explicitly disclose wherein one of the quality characteristics considered is weight. Alibozek teaches using weight to compare respective measures of two candidate architectures for a product plan (Alibozek, page 92, the choice of wire, connectors, and associated parts can have a

significant impact of harness costs, quality, and weight. software can explore trade-offs using a routine and makes suggestions to improve harness).

Therefore, it would have been obvious for one with ordinary skill in the art at the time of the invention to combine method of synthesis routing with using weight to compare respective measures of two candidate architectures for a product plan for the purpose to tailor automobiles to their own specifications and accelerate design process (Shropshire: page 3; Alibozek: page 89).

18. As per claim 12, Shropshire discloses a method according to claim 9, but does not explicitly disclose further comprising automatically calculating a cost of assembly of electrical and electronic architecture as a function of a cost of assembly of a strand on a zone of the plurality of zones, of a cost of assembly of a connector on a zone boundary or on a zone of the plurality of zones, of a cost of assembly of a calculator on a zone of the plurality of zones, of a cost of assembly of a sensor or actuator on a zone of the plurality of zones, and of a cost of connection of a connector between zones or in a zone of the plurality of zones. Shropshire, however, discloses calculating cost by calculating adding costs of individual modules of a plurality of modules (Shropshire, page 7, cost of the individual modules are added together).

Therefore, it would have been obvious for one with ordinary skill in the art at the time of the invention to make the obvious variation from adding cots of individual models to using cost function of strand, connector, calculator, sensor, actuator and/or connector.

19. As per claim 13, Shropshire discloses a method according to claim 9, but does not explicitly disclose further comprising synthesizing optimal routing for all configurations, by repeating operations a) to d), criterion for minimization being a cost composed of: an estimated recurrent cost of parts, an estimate of quality cost in anticipation of the cost of repair per zone of the plurality of zones, this quality cost being increased by a constant cost depending on the zone and its ease of access, an estimate of the cost of weight, taking into account mechanical wear and consumption related to an increase of the weight of the vehicle, and/or an estimate of the cost of assembly. Alibozek teaches an estimate of the cost of weight, taking into account mechanical wear and consumption related to an increase of the weight of the vehicle (Alibozek, page 91, Weight is often an issue in vehicles, but it also determines how to fasten a harness to a chisis, for example, large harnesses that are not fastened securely can stress connection points and break under low-level shock and vibration).

Therefore, it would have been obvious for one with ordinary skill in the art at the time of the invention to combine method of synthesis routing with an estimate of the cost of weight, taking into account mechanical wear and consumption related to an increase of the weight of the vehicle for the purpose to tailor automobiles to their own specifications and accelerate design process (Shropshire: page 3; Alibozek: page 89).

20. As per claim 14, Shropshire further discloses a method according to claim 9, applied to synthesis of the electrical architecture of a newly created product or to synthesis of an electrical architecture modified relative to a previous architecture (Shropshire, page 6, a core harness and a set of option modules).

21. As per claim 15, Shropshire discloses a computer readable storage medium including computer executable instructions to synthesize a routing, Wherein the instructions, when executed by a processor, cause the processor to perform a method, comprising:

- ✓ a) obtaining parameters of:
  - different configurations of service variants and calculator variants (Shropshire, page 6, design is split into modules that roughly map to the options available to the customer. there is a virtual parent harness which includes all possible modules) and a percentage occurrence of the configurations, a sum of proportions of the configurations being considered equal to one,
  - cost characteristics of components stored and weighted as a function of their respective installation proportions (Shropshire, page 7, amount of material needed is a function of the modules chosen and can usually be approximated),
  - partial or complete mapping of service variants onto calculator variants (Shropshire, page 6, design is split into modules that roughly map to the options available to the customer. there is a virtual parent harness which includes all possible modules),
- ✓ b) identifying valid routings (Shropshire, page 5, wiring harness design is analyzed and module data is created automatically);

- ✓ c) evaluating routing cost of the valid routings for each configuration (Shropshire, page 7, amount of material needed is a function of the modules chosen and can usually be approximated); and

Shropshire does not explicitly disclose a percentage occurrence of the configurations, a sum of proportions of the configurations being considered equal to one and d) determining the valid routing that minimizes the mean, weighted by the installation proportions of each configuration, of the routing costs for each configuration. Alibozek teaches identifying all possible occurrences (Alibozek, page 92, a smart algorithm explores all possible paths) and determining optimized routing (Alibozek, page 92, algorithms derived from user input data automatically optimize the wire harness for its environment by balancing cost). Alibozek also teaches e) displaying, in a first view on a display, a plurality of zones into which the service variants and the calculator variants are grouped, wherein the first view includes a guide to indicate how the plurality of zones are situated relative to one another (see at least Alibozek, page 91, the figure on the upper right corner shows a display for a plurality of zones into which the wires are grouped and shows how each zones are situated relative to one another); and f) displaying, in a second view on the display, the valid routing that minimizes the mean of a single zone of the plurality of zones (see at least Alibozek,, page 91-92, the figure on lower corner of page 92 states that embassy lets designer select subassemblies and magnify components to observe individual connections; and see page 92, figure on the upper left corner, which states that using the logical and physical information in the data model, optimization techniques control the correct design output)

Therefore, it would have been obvious for one with ordinary skill in the art at the time of the invention to combine method of synthesis routing with determining optimized routing and for the purpose to tailor automobiles to their own specification and accelerate design process (Shropshire: page 3; Alibozek: page 89).

22. As per claim 16, Shropshire discloses a device for synthesis of a routing, comprising:

- ✓ a) means for obtaining parameters of:
  - o different configurations of service variants and calculator variants and a percentage occurrence of the configurations, a sum of proportions of the configurations being considered equal to one (Shropshire, page 6, design is split into modules that roughly map to the options available to the customer. there is a virtual parent harness which includes all possible modules),
  - o cost characteristics of components stored and weighted as a function of their respective installation proportions (Shropshire, page 7, amount of material needed is a function of the modules chosen and can usually be approximated), and
  - o partial or complete mapping of service variants onto calculator variants (Shropshire, page 6, design is split into modules that roughly map to the options available to the customer. there is a virtual parent harness which includes all possible modules);

- ✓ b) means for identifying valid routings (Shropshire, page 5, wiring harness design is analyzed and module data is created automatically);
- ✓ c) means for evaluating routing cost of the valid routings for each configuration (Shropshire, page 7, amount of material needed is a function of the modules chosen and can usually be approximated);

Shropshire does not explicitly disclose a percentage occurrence of the configurations, a sum of proportions of the configurations being considered equal to one and d) means for determining the valid routing that minimizes a mean, weighted by the installation proportions of each configuration, of the routing costs for each configuration. Alibozek teaches means for identifying all possible occurrences (Alibozek, page 92, a smart algorithm explores all possible paths) and means for determining optimized routing (Alibozek, page 92, algorithms derived from user input data automatically optimize the wire harness for its environment by balancing cost). Alibozek also teaches e) a display configured to display, in a first view, a plurality of zones into which the service variants and the calculator variants are grouped, wherein the first view includes a guide to indicate how the plurality of zones are situated relative to one another, and in a second view, the valid routing that minimizes the mean of a single zone of the plurality of zones (see at least Alibozek, page 91, the figure on the upper right corner shows a display for a plurality of zones into which the wires are grouped and shows how each zones are situated relative to one another; and see page 91-92, the figure on lower corner of page 92 states that embassy lets designer select subassemblies and magnify components to observe individual connections; and see page 92, figure on the upper left corner, which states that using the logical

and physical information in the data model, optimization techniques control the correct design output).

Therefore, it would have been obvious for one with ordinary skill in the art at the time of the invention to combine device of synthesis routing with means for determining optimized routing for the purpose to tailor automobiles to their own specification and accelerate design process (Shropshire: page 3; Alibozek: page 89).

23. As per claim 18, Shropshire discloses a method according to claim 9, Alibozek teaches wherein the displaying in the second view includes prohibited subzones through which valid routings do not pass (see at least Alibozek, page 91, figure on the upper right corner, wherein there are areas where routings do not pass).

Therefore, it would have been obvious for one with ordinary skill in the art at the time of the invention to combine device of synthesis routing with the displaying in the second view includes prohibited subzones through which valid routings do not pass for the purpose to tailor automobiles to their own specification and accelerate design process (Shropshire: page 3; Alibozek: page 89).

24. As per claim 21, Shropshire discloses a method according to claim 15, Alibozek teaches wherein the displaying in the second view includes prohibited subzones through which valid routings do not pass (see at least Alibozek, page 91, figure on the upper right corner, wherein there are areas where routings do not pass).

Therefore, it would have been obvious for one with ordinary skill in the art at the time of the invention to combine device of synthesis routing with the displaying in the second view includes prohibited subzones through which valid routings do not pass for the purpose to tailor automobiles to their own specification and accelerate design process (Shropshire: page 3; Alibozek: page 89).

25. As per claim 24, Shropshire discloses a device according to claim 15, Alibozek teaches wherein the displaying in the second view includes prohibited subzones through which valid routings do not pass (see at least Alibozek, page 91, figure on the upper right corner, wherein there are areas where routings do not pass).

Therefore, it would have been obvious for one with ordinary skill in the art at the time of the invention to combine device of synthesis routing with the displaying in the second view includes prohibited subzones through which valid routings do not pass for the purpose to tailor automobiles to their own specification and accelerate design process (Shropshire: page 3; Alibozek: page 89).

26. **Claims 17, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shropshire in view of Alibozek, further in view of Ishikawa et al. (hereinafter Ishikawa, US 6457165 B1).**

27. As per claim 17, Shropshire discloses a method according to claim 9, Ishikawa teaches wherein the displaying in the first view does not show the valid routings of the service variants and the calculator variants (see at least Ishikawa, Fig. 12, see that the routing is missing).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include displaying in the first view does not show the valid routings of the service variants and the calculator variants as taught by Ishikawa in the method of Shropshire, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

28. As per claim 20, Shropshire discloses a computer readable storage medium according to claim 15, Ishikawa teaches wherein the displaying in the first view does not show the valid routing of the service variants and the calculator variants (see at least Ishikawa, Fig. 12, see that the routing is missing).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include displaying in the first view does not show the valid routings of the service variants and the calculator variants as taught by Ishikawa in the method of Shropshire, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

29. As per claim 23, Shropshire discloses a device according to claim 16, Ishikawa teaches wherein the display does not show the valid routings of the service variants and the calculator variants (see at least Ishikawa, Fig. 12, see that the routing is missing).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include displaying in the first view does not show the valid routings of the service variants and the calculator variants as taught by Ishikawa in the method of Shropshire, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

30. **Claims 19, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shropshire in view of Alibozek, further in view of Ozaki (US 7200537 B2)**

31. As per claim 19, Shropshire discloses a method according to claim 9, Ozaki teaches wherein the displaying in the first view includes a first compass as the guide (see at least Ozaki, Fig. 2, wherein the head of car acts as a compass showing), and the displaying in the second view includes a second compass to indicate how to orient the single zone (see at least Ozaki, Fig. 20, wherein the orientation can be easily determined because the base and direction arrow presented)

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the displaying in the first view includes a first compass, and the displaying in the second view includes a second compass to indicate how to orient the single zone as the guide as taught by Ozaki in the method of Shropshire, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

32. As per claim 22, Shropshire discloses a computer readable storage medium according to claim 15, Ozaki teaches wherein the displaying in the first view includes a first compass as the guide (see at least Ozaki, Fig. 2, wherein the head of car acts as a compass showing), and the displaying in the second view includes a second compass to indicate how to orient the single zone (see at least Ozaki, Fig. 20, wherein the orientation can be easily determined because the base and direction arrow presented)

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the displaying in the first view includes a first compass, and the displaying in the second view includes a second compass to indicate how to orient the single zone as the guide as taught by Ozaki in the method of Shropshire, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

33. As per claim 25, Shropshire discloses a device according to claim 16, Ozaki teaches wherein in the first view, the display includes a first compass as the guide (see at least Ozaki, Fig. 2, wherein the head of car acts as a compass showing), and in the second view, the display includes a second compass to indicate how to orient the single zone (see at least Ozaki, Fig. 20, wherein the orientation can be easily determined because the base and direction arrow presented)

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the displaying in the first view includes a first compass, and the displaying in the

second view includes a second compass to indicate how to orient the single zone as the guide as taught by Ozaki in the method of Shropshire, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

34. Please Note:

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *e.g. In re Collier*, 158 USPQ 266, 267 (CCPA 1968)

Examiner has marked examples of intended use languages in **bold** as a courtesy to the Applicant.

Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

35. Response to Argument

36. Regarding Applicant's argument directs to rejection under 35 USC 101

37. **Applicant's arguments have been fully considered but they are not persuasive.**

38. The display appears to be insignificant post-solution activity; therefore, Examiner is maintaining the rejection; please refer to the office action set forth above.

39. Regarding Applicant's argument directed to rejection under 35 USC 103(a),

40. **Applicant's arguments have been fully considered but they are not persuasive.**

41. As per Applicant's argument that *accordingly, the method for synthesis of a routing recited in amended claim 9 includes displaying a first and a second view on a display [...] it is respectfully submitted that the cited references do not disclose or suggest every feature recited in the amended claim 9* and *it is respectfully submitted that Shropshire does not disclose or sugest "e) [...] and f) [...]"* and *Instead, Alibozek describes that the individual harnesses can be shown in 3D and that nailboard drawings can show where cables run, but Alibozek does not describe that the routing of the entire routing is broken up into groups and displayed as a plurality of zones. Additionally, Alibozek does not describe a guide to indicate how the plurality of zones are situated relative to one another. Further, Alibozek does not describe an alternative view showing the valid routing for an entire single zone* (Alibozek also teaches e) displaying, in a first view on a display, a plurality of zones into which the service variants and the calculator variants are grouped, wherein the first view includes a guide to indicate how the plurality of zones are situated relative to one another (see at least Alibozek, page 91, the figure on the upper right corner shows a display for a plurality of zones into which the wires are grouped and shows how each zones are **situated relative to one another**); and f) displaying, in a second view on the

display, the valid routing that minimizes the mean of a single zone of the plurality of zones (see at least Alibozek,, page 91-92, the figure on lower corner of page 92 states that embassy **lets designer select subassemblies and magnify components to observe individual connections**; and see page 92, figure on the upper left corner, which states that using the logical and physical information in the data model, optimization techniques control the correct design output)).

42. As per Applicant's argument directed to claim 15 and 16 regarding similar limitations as claim 9, please see the office action set forth above

43. As per Applicant's arguments that *it is respectfully submitted that the cited references do not discloses or suggest displaying prohibited subzones through which valid routings do not pass. Therefore, it is respectfully submitted that new claims 18 and claims 21, and 24 which recite similar features, further patentably define over the cited references* (see at least Alibozek, page 91, figure on the upper right corner, wherein there are areas where routings do not pass; therefore, prohibited areas where routings do not run through are included).

44. **Applicant's arguments have been fully considered but are moot in view of the new arts applied**

45. Regarding Applicant's argument toward new claims 17, 20, 23, 19, 22, and 25, the arguments are moot in view of the new prior arts applied.

46. Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Chen whose telephone number is (571)270-5499. The examiner can normally be reached on Mon-Thu 6:30-5:00 Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on (571)272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/G.C./

/John W Hayes/
Supervisory Patent Examiner, Art Unit 3628